

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method for synchronizing a plurality of digital input signals, which are each formed by sampling with a dedicated operating clock, comprising:

forming digital auxiliary signals using only one resampling device by sampling the digital input signals with a post-processing clock, which is at least twice as fast as the fastest operating clock; and

forming synchronized digital output signals which correspond to the digital input signals by interpolating each digital auxiliary signal, wherein before sampling the digital input signals with the post-processing clock, the respective digital input signals are filtered with a filter having a characteristic which is an inverse of a characteristic of an interpolation filter used for interpolating.

2. (Canceled)

3. (Previously Presented) The method as claimed in claim 1, further comprising:

filtering the synchronized digital output signals with an anti-aliasing filter directly after the interpolation.

4. (Previously Presented) The method as claimed in claim 1, wherein

the digital input signals are obtained from secondary variables, sampled with a dedicated operating clock, of measuring transducers in an electric power supply system.

5. (Currently Amended) The method as claimed in claim ~~[[4]]~~ 3, further comprising:

forming the digital auxiliary signals directly from the input signals and using an integrator for the interpolation when the digital input signals are formed from secondary variables of Rogovsky measuring transducers.